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ABSTRACT

The cost benefits of a model work training program for at-risk youth in New York City were analyzed. Starting with an individual assessment of each client's needs, the INTERFACE youth employment training program included these components: work experience in public service projects, literacy education/equivalency diploma preparation, classroom preemployment and occupational skills training, support services, and certification. Predictions were that a one-year program would cost $11,616 per completer or $10,745,235 for a cycle for 1,000 youths. Returns to the city would be saved welfare benefits, taxes paid by an employed trainee, and the value of participant output. The best estimate was that for its investment of approximately $10.7 million, the city would realize a total return of $12,952,126 in 10 years--a "profit" of more than $2 million, or 21 percent. The cost-benefit methodology was tested against a working example--the Women's Ventures in Community Improvement (VICI) program. Findings indicated the VICI program has an even higher output than that estimated for the youth program. Each dollar of program costs resulted in $1.34 worth of total benefits to the participants and to society. (A description of the design of the youth employment training program is appended.) (YLB)

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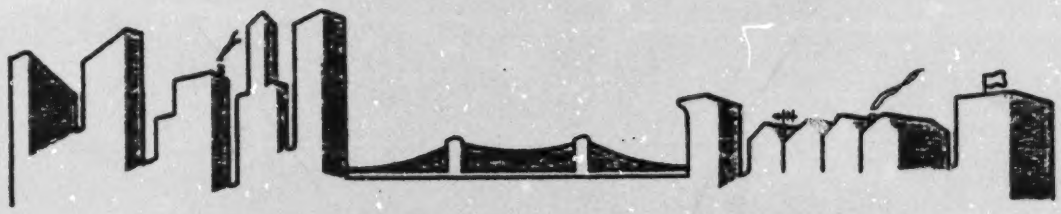

THE VALUE OF YOUTH WORK

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The New York Interface Development Project, Inc., commonly called "INTERFACE," works to make New York a more effective and efficient city through a broad range of activities. Organized as a non-profit group in 1974, INTERFACE conducts research, recommends public policy, and provides training and management assistance to government and community workers to help them implement programs and improve services. Major areas of concentration have included public schools, economic and community development, employment, and social services for children, youth and families. Funding for INTERFACE work is provided by foundations, corporations, and public and voluntary agencies.

THE VALUE OF YOUTH WORK

May 1984

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I. OVERVIEW

Introduction

For youth, unemployment is a problem already of crisis proportions -- and growing, despite improvements for other members of the labor force. Current federal efforts to combat this rising tide are clearly inadequate -- especially for our most disadvantaged youths. Protests about the costs of making high risk adolescents employable are outweighed by the costs of doing nothing, as jobless youths grow into an adult underclass of the hard-core unemployed. This report analyzes the cost-benefits of a model work training program for at-risk youth in New York City. It makes the case that a public investment in such a program would yield a positive economic return to the city in community improvements, saved public assistance benefits and future tax revenues. For every dollar in public expenditures on this project, the city would realize $1.21 in benefits. A $10 million program could train 1,000 young people in one year and demonstrate that a carefully-designed and supervised effort could yield years of benefits for both the young people involved and the city as a whole.

Youth Unemployment: A Growing Problem

For the past thirty years, the youth unemployment rate in the United States has remained impervious to both economic upturns and fragmented government efforts to lower it. In fact, young people aged 16-24 have made up an ever increasing share of the unemployed --

from 30 percent in 1955 to 49 percent in 1979.[1] For white youth, unemployment rose 5 percent during that period, for black youth it rose 20 percent.[2]

In New York City, according to a study conducted by INTERFACE in 1983[3] there were 150,000 16 to 21 year olds available for work but unemployed, amounting to an effective youth unemployment rate of 40 percent. For black teen-agers, this rate exceeds 50 percent. In the last decade alone, the youth unemployment rate in the city has tripled.

According to data from the South Bronx Development Organization, the estimated youth unemployment rate is more than three times the city average, and the gap continues to widen. In every borough except Staten Island, there are community districts where more than 55 percent of the 16 to 19 year olds are jobless, and at least six districts show youth unemployment rates of 60 percent.

Costs of Youth Unemployment

The human costs of our failure to stem the rising tide of youth unemployment are immeasurable -- particularly its contribution to family disintegration, personal anguish, social and economic

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1 Martin Neil Baily, "The Problem of Unemployment in the United States," in Jobs for the Future , Center for National Policy, Washington, D.C., May 1984.

2 Andrew Hahn and Robert Lerman, The CETA Youth Employment Record, Center for Human Resources, Waltham, Massachusetts, 1983.

3 "Youth Unemployment: The Cost of Doing Nothing," New York City, June, 1983.

deprivation, addiction and violence. In addition there are the hard financial and economic costs of unemployment -- costs borne by all taxpayers and by the society as a whole. Public assistance benefits to unemployed youth cost the city almost $70 million a year. In terms of crime alone, the cost to the city criminal justice system for 16 to 21 year olds amounts to $275 million a year.[4]

In addition, of course, there is the loss of tax revenues to the city because young people are not working. In fact, the INTERFACE research showed that for every thousand 20 year old household heads currently receiving welfare who are put to work, the city would gain $1.3 million in direct benefits and about $300 million in increased economic output. The question is, however, how much of an investment will it take to put these young people to work? And is it a worthwhile investment, considering the cost?

Investing in Youth

Noted labor economist Sar Levitan has said,

> "The basic economic premise of both education, and training programs, aside from their intrinsic value to the individuals concerned, is that investing in the development of improved resources will result in a net economic benefit to society, independent of the effects of larger economice forces."[5]

In other words, before investing in a program to train young people for jobs, government has the right to ask whether the return on its investment will make the effort worthwhile. That is the

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4 INTERFACE, study prepared for New York Foundation, August 1983.

4 Sar A. Levitan and Garth L. Mangum, "A Quarter Century of Employment and Training Policy: Where Do We Go From Here?" in Center for National Policy, op. cit.

question this study addresses, with specific reference to a model youth training program for New York City.

Studies of the cost/benefits of national demonstration projects have shown mixed results. Most employment and training programs appear to have been reasonable investments. Programs targeted to the most disadvantaged young people, however, have had positive outcomes only when they are carefully targeted, designed and supervised.[6]

The keys to successful programs for young people who lack basic employability skills are carefully supervised work experience combined with education and support services.[7] Public service employment programs, in particular, are generally designed to yield benefits to the community beyond the increase in the participants' future earning power and employability, because of the value of the work the trainees perform. However, unless the work is accompanied by educational and literacy services, skills training and on-the-job counseling, program enrollees are unlikely to go on to permanent employment.

One such program was tested on a national scale. The Venture in Community Improvement (VICI) project funded under the 1977 federal Youth Community Conservation and Improvement Program, was designed to "provide youths with intensive skills-training in the

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[6] Robert Taggart, A Fisherman's Guide: An Assessment of Training and Remediation Strategies, Upjohn Institute for Employment Research, 1981.

[7] Bernard Lefkowitz, Jobs for Youth: What We have Learned, Edna M. Clark Foundation, 1982.

workplace to produce tangible, valuable and lasting community improvements."[8] Training and work experience in the building trades emphasized the "finished production of quality work." In fact, workmanship on the job was rated as equalling or exceeding that of a professional contractor in 86 percent of the cases; appearance of final product was so rated 90 percent of the time. In addition to producing valuable products, the program also significantly improved the ability of disadvantaged participants to obtain jobs or apprentice positions and subsequently to increase their wages. A cost benefit analysis showed that for every public dollar expended, 47 cents worth of community improvements were left in place. The benefits to society from program participants' wages over 40 years (excluding reduction in public assistance benefits or criminal activity) outweighed the cost of the program by 1.5 to 1.

Need for a City Program

The federal Job Training Partnership Act (JTPA), the Reagan Administration's replacement for CETA, is unlikely to be able to serve the most disadvantaged young people. Regulations and lack of adequate funding severely limit the range, level, and duration of services that can be offered and tend to discourage local training program operators from accepting enrollees who will need extensive services to become employable. Furthermore, placement is highly

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8 Public/Private Ventures, VICI, Final Report of the Demonstration, 1983.

dependent upon business participation, and experience has shown that private employers are very selective about their trainees and are especially reluctant to employ youths.[9]

As an indication of the gaps in JTPA's service population, INTERFACE's interviews of local program operators indicate that they are able to serve only one in every 10 applicants. The main reason for rejecting applicants, they say, is their failure to meet City Department of Employment requirements for reading and math abilities.

To fill this gap, New York City must launch a comprehensive job training program for disadvantaged youths unable to participate in JTPA funded programs. Such a program would not only remove young people from the welfare rolls and turn them into taxpaying, productive citizens for years to come, it would also result in desperately needed rehabilitation of the city's parks, roads and housing stock.

Program Design

INTERFACE has designed a youth employment training program based on an analysis of existing local and national programs. (See Appendix A for a complete description.) Starting with an individual assessment of each client's needs, the program includes the following components:

a) work experience with skills training, stipends, and close on-the-job supervision in small work crews;

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9 Taggart, op cit.

b) literacy education/equivalency diploma preparation, if needed;

c) classroom pre-employment and specific occupational skills training;

d) support services, as needed including: individual personal and career counseling, and housing, medical, day care service referrals;

e) certification for those who complete the training and job placement assistance.

The youths would rehabilitate deteriorating city-owned housing, parks and make other infrastructure improvements that would not otherwise get done, so they will not substitute for regular city employees. Supplies would be paid for with existing capital funds. New money would be needed for the educational and support services as well as the stipends.

According to the program design, the Department of Employment would identify work projects at city agencies interested in participating. DOE would let contracts to community-based organizations that would operate under clear performance standards and accountability requirements, matching the CBO's and work crews with appropriate projects. A $10 million program could train and employ 1,000 young people not presently served by federal programs.

Cost Benefits of Program

A one-year youth employment program of the type we have described would cost $11,616 for each participant who completes the program or $10,745,235 for a cycle for 1,000 youths, to train young people in a variety of public service projects and provide a full range of supervisory, educational and support services. (Costs

include all personnel and administrative costs, including stipends for the participants, but not the cost of materials and supplies, which, in many cases, are already available, and in most cases are minimal.)

The return to the city from this investment consists of three major components: saved welfare benefits; taxes paid when the trainee is fully employed; and the value of the trainees' output while participating in the program. The first two can be calculated according to fairly reliable averages over a ten-year period. The productivity value, however, will vary greatly depending on the kind of work the crews perform. The output value may vary from almost $6 million to over $7.5 million. However, our best estimate is that for its investment of approximately $10.7 million, the city realize a total return of $12,952,126 in ten years -- a "profit" of more than $2 million, or 21 percent.

A complete description of the analysis and methodology follows in Section II.

II. COST BENEFIT ANALYSIS

Methodology

The chief means of assessing the cost-effectiveness of such a program and concurrently, the productivity of young people was to:

a) identify work in the city that is not presently being performed and could be performed by highly supervised youth working in crews; and

b) to establish the productivity of individuals already involved in similar programs.

A simple methodology for valuating the work performed by program participants and by regular city employees was adapted from similar efforts to measure the value of community improvements. We identified a method of judging the cost effectiveness of an existing program -- the Women's VICI program -- and then adapted it for use in predicting the cost-effectiveness of the proposed program.

Based upon the extensive work conducted by the Mathematica Policy Research, Inc. on the National Supported Work Demonstration project[10] and its adapted uses in assessments of the 1979 SYEP program and the Ventures in Community Improvement (VICI)[11] program we developed a work valuation methodology. The Women's VICI program operating in New York City became the project model against which

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[10] Peter Kemper, David A. Long and Craig Thornton, The Supported Work Evaluation, Volume 5: Final Benefits-Cost Analysis (Mathematica Policy Research, Inc. September 1981), and David R. Zimmerman, A Study of the Value of Ouput of Participants in the Summer Youth Employment Program: Final Report (Mathematica Policy Research, Inc. March 1980).

[11] Op. cit.

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the work valuation methodology was tested. That model is fully described in the final section of this report.

Beyond looking at the quality of the work and the relative labor productivity of the participants it is important to attempt to assess the value of the projects' benefits (during and after) relative to its costs. Generally such comparisons involve a very large and complex set of calculations and attempts to quantify costs and benefits which cannot be easily measured. In many of the cases "proxy" measures are used.

The available literature on cost/benefit shows that costs and benefits can be viewed from many different perspectives. We have utilized the societal perspective, limiting our analysis to the project's impact on taxes, levels of taxpayer payments and the value of the output to be performed. Obviously, the proposed program must include a sophisticated evaluation to enable us to determine long-term benefits to participants and society.

The costs we are concerned about in this analysis include foregone tax revenues and public assistance expenditures for the 1,000 program participants, the project costs of supervision, training, participants' labor costs, and administration.

Costs

The program cost for 1,000 participants is based upon the following assumptions:

a) Stipends of $3.35 per hour.

b) Annual salary, based on 7-hour days and 241 paid days (including 12 sick days and 8 holidays). There will be no compensation for any other days missed.

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c) A fringe benefit package of 10 percent to cover Social Security and worker's compensation.

d) Supervision and remedial and support services as detailed below and described in the "Worksite Training Program Design."

The following is the projected budget for all program services excluding participant stipends.

TABLE 1

SERVICE BUDGET[a]
[Supervision, Remediation, Support Services and Administration]
(for 1,000 participants)[b]

10 Project Directors @ $20,000/yr.	$ 200,000
145 Crew Leaders (1:7 ratio) @ $15,000/yr.	2,175,000
10 Work Coordinators @ $18,000/yr.	180,000
20 Teachers @ $20,000/yr. (each teacher works with 4 groups of 12-13)	400,000
5 F.T.E. Job Developers @ $16,000/yr. (to develop 500 job placements)	80,000
34 Counselors (1:30 ratio) @ $16,000/yr.	544,000
10 Secretaries @ $13,000/yr.	130,000
10 half-time Bookkeepers @ $15,000/yr.	75,000
Sub-total Personnel Services	$3,784,000
Fringe Benefits @ 20%	756,000
Total Personnel Services	$4,540,800
10% Indirect Costs	454,080
Total Costs	$4,994,880

NOTES:

a. This budget cost does not include supplies, materials, allocations for rent, motor vehicles, etc. This will vary widely by job and agency. For some agencies, the net cash outlay may be zero since supplies and equipment are already purchased. In any case, the value of materials has not been added to the benefits side of the cost-benefit ratio, either.

b. Only 85 percent of program participants will complete the program. This is based on evidence from the Youth Conservation Corps, Youth and Adult Conservation Corps and Youth Conservation Community Improvement Projects. It is assumed that dropouts will average six months in the program, reducing program costs by 7.5 percent. This yields the equivalent of 925 full-year participants (hereafter referred to as FTEs) as a base for stipend costs.

Calculation of Program Costs

At $3.35/hour for 241 days, the stipend costs are $5,651.45 per employee. Fringe benefits at 10% are $565.15. This gives total compensation of $6,216.60 per person. For 925 FTEs [see note (b) above] the total compensation cost is $5,750,355.

TABLE 2
Total Program Cost Summary
(1,000 Participants)

Element	Amount
Stipends	$5,227,591.25
Fringe benefits	522,763.75
Sub-total	$5,750,355.00
Services Costs	4,994,880.00
Total Costs	$10,745,235.00

Full program costs for one year are approximately $10.7 million including participant stipends, support services and administration -- approximately $11,616.50 for each of the 925 who complete the program.

Benefits

The economic value of the program's benefits can be projected based on experience of comparable programs.

The benefits stream will have two components for this analysis: cash flow savings from public assistance and taxes, and estimated value of output.

A. Cash Flow Savings From Public Assistance and Taxes

The basic assumptions are:

a) 100 percent of program applicants are eligible for and receive public assistance.

b) The public assistance grant is funded 50 percent by the federal government, 25 percent by the state and 25 percent by the city.

c) The city savings are the only savings which have significance for the city budget. State and federal savings, while a benefit, have not been calculated.

d) Public assistance savings during the program are distinct from the present value of the cash flow savings from future years when it is assumed that some program participants will get permanent jobs. See (e).

e) Fifty-five percent of program completers will obtain full-time employment in the first year following the program. Others are likely to be placed in "positive terminations" such as further education or technical training. In these cases, the program will have assisted these individuals, but will not generate immediate budget savings.

f) Program dropouts will again begin to receive public assistance. Thus public assistance savings will accrue to the city for only 46.75 percent of those enrolling [.55 (percent employed) x .85 (percent completing program)=.4675].

g) Salaries upon completion will be:

Year 1 : $4.20 per hour
Year 2 : $4.92 per hour
Years 3-10: Increase at 6% per year.

These salaries are based upon Survey of Income and Employment tabulations of wages, work rates and age. Youth 18-19 earned approximately 25.36% more than youth 16-17 (minimum wage) and 17-18% less than youth 20-21. We have calculated the dollar values as follows: 16-17 ($3.35); 18-19 ($4.20); 20-21 ($4.92). See "Youth Employment in New York City: The Cost of Doing Nothing," p. 15 for further details.

h) A discount rate of 10 percent for a term of 10 years and a nominal inflation rate of 6 percent annually. The discount factor is based on the New York City borrowing rate for long term bonds.

i) New York City taxes generated by each employed person are based on an effective rate of 5 percent of income. This parallels the "Cost of Doing Nothing," (pp. 16-23) and includes both income taxes (at an effective rate of approximately 1%) and sales taxes (4.25% applied to 72-84% of income used for taxable consumption).

With these assumptions, the program benefits can be determined. The public assistance grant is valued at $772.00 for each individual. This is the New York City cost for the average annual payment to 16 to 21 year olds reflecting both the varying size of grants for dependent youth and youthful heads of households, and the distribution of these groups among all public assistance recipients. (See "The Cost of Doing Nothing," pp. 5-12.)

For the program year, savings are based on 925 FTEs completing the program. Dropouts are assumed to go back on public assistance immediately. For the years 1-10 in Table 3, (after the program year), savings are based on 468 people who find employment. Obviously, this is an extreme underestimate. Both those who complete the program but are given positive placements other than full-time jobs and those who do not immediately find work will likely work, and thus not receive public assistance during the next 10 years. For many, earnings will be enhanced by the program experience, although none is assumed in these calculations.

TABLE 3
Public Assistance Savings

Year	Future Value (Per Person) [1]	Present Value (Per Person) [2]	Number Employed
0	$ 772.00	$ 772.00	925
1	818.32	743.93	468
2	867.42	716.88	468
3	919.46	690.81	468
4	974.63	665.68	468
5	1,033.11	641.48	468
6	1,095.10	618.16	468
7	1,160.80	595.67	468
8	1,230.45	574.01	468
9	1,304.28	553.14	468
10	1,382.53	533.03	468

Total Present Value Years 1-10 $6,332.79 per person

[1] escalated at 6%/annum
[2] discounted at 10%

TABLE 4
Total Public Assistance Savings

Year	Number Employed	Per Person	Amount
1	925	$ 772.00	$ 714,100
1-10	468	6,332.79	2,963,746
	Total Savings		$3,677,846

The second benefit from the program is the generation of tax revenues for the city. We have used a nominal 5 percent of salary as the effective tax rate, including sales and income taxes.

Table 5 contains the future and present value of income and taxes for years 0-10. Based on INTERFACE's earlier study, we can project an average wage of $4.20/hour for those 468 participants who move on to permanent jobs, for the first year. In the second year the wages rise to $4.92/hour. For years 3-10, we have allowed wages to rise 6 percent per annum.

TABLE 5
Tax Revenues

Year	Income-Future Value	Taxes (Future Value) Per Person	Taxes (Present Value) Per Person	Number Employed
0	$5,651.45	$282.58	$282.58	925
1	7,085.40	354.27	322.06	468
2	8,300.04	415.00	342.98	468
3	8,798.04	439.90	330.50	468
4	9,235.92	466.30	318.49	468
5	9,885.48	494.27	306.90	468
6	10,478.61	523.93	295.74	468
7	11,107.33	553.37	283.97	468
8	11,773.77	588.69	274.63	468
9	12,480.19	624.01	264.41	468
10	13,229.00	661.45	255.02	468
Total Present Value Years 1-10			$2,994.70 per person	

TABLE 6
Total Tax Revenues

Year	Number Employed	Per Person	Total Taxes
0	925	$ 282.58	$ 261,387
1-10	468	2,994.70	1,401,520
Total Tax Revenues			$1,662,907

B. Value of Output

The approach used to calculate value relies on estimates of productivity found in similar programs. In the Mathematica Study of the value of output of participants in the Summer Youth Employment Program, New York City was the absolute lowest in terms of labor productivity (defined in that study, as the ratio of "Participant Supply Price Per Hour" to "Regular Worker's Price Per Hour To Provide Same Service"). New York City's youth had a labor productivity ratio of 0.35, compared to an average of 0.56 for the

eight cities in the study. The two key reasons for this, according to the study, were overstaffing (thus leading to poor supervision) and an emphasis on child care projects where output is difficult to measure.

If we approach this project with somewhat loftier goals and attempt to attain the average labor productivity found in the Mathematica study, the value of program participants' output would be approximately 56 percent of that of regular employees.

If we further assume that the value of output of regular workers is equal to the price of regular workers, then the value of output of the program participants is equal to 56% of salary of regular workers. This would be a "lower bound" on the value of output.

We have considered two separate cases for the value of output determination. Case A covers the situation where the participants perform tasks for which the city would normally pay twice the minimum wage. For the "value" determination we considered only straight salary. For Case A, then, value of output is simply 56 percent of the salary of 925 FTEs working at this minimum wage. The calculation is:

Case A Value = (925)(.56)(2)($5,651.45) = $5,854,902

The second case reflects the situation where higher priced employees would have done the work. Comparable civil service titles yield a wage level approximately 2.6 times minimum wage. For example, the park service worker title has an entry salary of $14,781, or 2.6 times minimum wage. In this case, the value calculation is:

Case B Value = (925)(.56)(2.6)($5,651.45) = $7,611,373

TABLE 7
Value of Output

Case	Productivity	Multiple of Minimum Wage	Value of Output
A	.56	2.0	$5,854,902
B	.56	2.6	7,611,373

Cost-Benefit Calculation

The calculation of the cost-benefit ratio is straight-forward. Table 8 summarizes the costs and benefits and contains the Cost-Benefit (C-B) ratio for Case A and Case B.

The Cost-Benefit Ratio is calculated as:

C-B Ratio = 1/(Total Benefits/Total Costs)

= 1/[(P.A. Savings + Taxes + Value of Output)/Total Costs]

TABLE 8
Cost-Benefit Analysis

Case	Program Cost	P.A. Savings	Taxes	Value of Output	Total Benefits	C-B Ratio
A	$10,745,235	$3,677,846	$1,662,907	$5,854,902	$11,195,655	1:1.04
B	$10,745,235	$3,677,846	$1,662,907	$7,611,373	$12,952,126	1:1.21

For Case A, where the participants do tasks normally done by the lowest paid civil service workers, the program has a very modest C-B ratio of 1:1.04. If participants are allowed to do tasks that intrinsically have more value, then they will create more value. In Case B we see a C-B ratio of 1:1.21, a 21% return on investment.

Although it would cost $10.75 milli[illegible] to have 468 participants, out of 1,000, land permanent jobs, the C[illegible] f New York would receive

back in benefits, at least in Case B, of $12,952,126. If the program is repeated each yoar with similar results, the city would have initiated a very profitable program, not only for itself but for the people who can find permanent employment.

The next section reviews the cost-benefit analysis for the test model -- the Women's VICI Program.

III. COST BENEFIT ANALYSIS -- WOMEN'S VICI PROGRAM

The New York City Board of Education Division of School Buildings (DSB), the Painter's union and the Department of Employment are co-sponsors of a program to train women on AFDC for journeyman status in the union. We have highlighted this program to demonstrate that work-training programs in New York City can and do produce high-quality products of real economic value. Second, we used the program to test our cost-benefit methodology against a working example.

We found, in fact that the VICI program has an even higher output than we estimated for the youth program.

The Women's VICI program employs women who are AFDC eligble, age 18-25 and, according to DSB, have a high school diploma. The Department of Employment refers applicants to the union and the union selects approximately 12-15 women for the program. The union supervises the women in the painting of classrooms and offices of the Board of Education.

The normal apprenticeship in the Painter's union is three years; under this program, the women have an apprenticeship of one year. At the end of the program, if they pass, they become journeymen. This program began in January 1983, with 14 women. During the course of the year several dropped out and were replaced by the union. By January, 1984 nine women graduated to journeyman status, approximately 50 percent of all those who entered the program.

During the program, the wages for the apprentices are the "going rate." In the first quarter they receive 60 percent of the

journeyman wage (now $15.16/hour and scheduled to go up). In the second quarter wages rise to 70 percent of journeyman wages; the third quarter wage rate is 80 percent; and the fourth quarter wage rate is 90 percent of journeyman wages. Hence, the apprentice is earning wages at the following rates:

TABLE A

APPRENTICESHIP RATES
AFDC-PAINTERS' PROGRAM
1983-1984

Quarter	% of Journeyman Rate	Hourly Amount	Annualized Rate*
1	60%	$9.10	$16,526
2	70%	10.61	19,384
3	80%	12.13	22,162
4	90%	13.64	24,920
Graduation	100%	15.16	27,697

* Based on the following: 7 hours a day x 261 days per year.

Clearly, these wages are higher than the income from AFDC. Not only does the City save on AFDC payments, the Board of Education gains from having school buildings painted.

TABLE B*

Painter's Apprentice Project

School	Project	Time for Completion
I.S. 239 Brooklyn	Fire damaged 1st Floor	5 weeks
P.S. 143 Queens	Auditorium	7 days
H.S. Redirection Brooklyn	15 classrooms	6 weeks
I.S. 371 Brooklyn	Entire school	12 weeks
I.S. 371 Office Building	Entire building	5 weeks
District Office 21 Brooklyn	Entire floor of office space	3 weeks
Bayridge H.S. Annex Brooklyn	4th floor	3 1/2 weeks
P.S. 180 Manhattan	Entire School	11 weeks
H.S. for Humanities Manhattan	16 classrooms; 3 stairwells	9 1/2 weeks
New Utrecht H.S. Brooklyn	Kitchen; 4 classrooms	2 weeks
Prospect Heights H.S. Brooklyn	Kitchen; teachers' cafeteria	4 weeks
WNYE 25 Brooklyn	Entire floor of office space	2 1/2 weeks
P.S. 98 Bronx	4th Floor	10 weeks
P.S. 67 Bronx	4 classrooms	6 days
I.S. 320 Brooklyn	4 classrooms	4 days
Stevenson H.S. Bronx	1 fire damaged classroom	3 days

* SOURCE: Memorandum from Ms. Terrie Guthrie, to Nicholas Borg, Executive Director, DSB, Feb. 8, 1984.

Utilizing the alternative supplier price approach we calculated the value of the output of the program as equal to the price that another supplier would charge for output equivalent to that produced by the programs' participants. In the case of the Women's VICI program, the Division of School Buildings estimators, experienced in the kind of work being performed, provided the estimate.

TABLE C
Cost Versus Estimate
Painter's Apprentice Project
1983

Borough/Project	DSB Estimate	Painter's Apprentice Program Cost
Brooklyn I.S. 239 First floor	$8,400	$23,000
Brooklyn I.S. 371 Entire school	50,000	33,000
Brooklyn, I.S. 371 Attached office	50,000	23,000
Bronx, P.S. 98 First floor	25,000	38,500
TOTAL	$133,900	$117,500

The total value of the work produced by the Women's VICI project was taken as the sum of the estimates that an alternative supplier would have charged to purchase the same output, in this case $133,900. (The DSB had not developed a methodology for determining the accuracy of their estimates.)

For these projects the program accomplished the same work at 87.8 percent of the estimated cost for a private contractor. Total program cost in 1983 to the Board of Education was $294,958 for labor and materials. Assuming the program achieved results at 87.8 percent of the cost of a private contractor, the Board saved $41,170 in 1983, the cost of painting one small school!

Relative Labor Productivity

The Mathematica strategy for defining the relative labor productivity estimates the price of an alternative supplier's labor in an employment program in which the participant supplies

only the labor. The general strategy is to derive an estimate of the program participants' productivity relative to that of regular workers.

One method of deriving that estimate is to calculate the value per dollar of expenditure [DSB estimate divided by Program Costs]. Using the estimates and actual expenditure from Table C we derive $1.14 worth of community improvements from each public dollar invested in the program.

Quality of Work Produced

The concept behind the Youth Conservation and Community Improvement Projects (YCCIP) the Youth and Adult Conservation Corps (YACC), VICI, etc. sought to combine work experiences with the completion of products with tangible economic value and with some community improvement as well. Without the work performed by the program participants at least meeting the productivity and quality standards set by DSB, the program could not meet its dual goals of training and production. In each of the projects of the Women's VICI program described in Table B, DSB sent inspectors out to review the work and, in every instance, the work passed inspection. In some instances school principals told DSB they felt the work was a higher quality than that done by private contractors. This indicates that the union provides reasonably good supervision to the apprentices. (The union provides two journeyman as teacher/supervisors.)

Cost Benefit Analysis

Only one class of Women's VICI participants has graduated to date. It is therefore difficult to assess long-term benefits to

the individuals based upon program participation. We adapted a very simple cost/benefit methodology to establish a C/B ratio that could be used here with the limited data available and which could be adapted for predicting the C/B ratio based upon the participation of young people in a similar project and with the same data limitation.

Clearly, measurement of the salient variables was a problem. Our data limitations stem from the lack of a rigorous experimental design built into the Women's VICI project that was appropriate for our use. Thus we lost the ability to develop a more complex C/B methodology. We were limited to an analysis of the value of the output and the impact of the program on the level of public assistance received by the participant. It is clear however that any attempt to assess the long-term benefits of program participation to society, to the Women's VICI participants and to the young people in the proposed youth employment project must build into these efforts a more rigorous experimental design.

One could calculate a cost/benefit ratio for the Women's VICI program as follows:

Program Costs

Salary + fringe benefits = (.75)(Journeyman rate)(1.20)
= (.75)($27,697)(1.20)
= $24,927 per person

Where 1.20 = fringe factor
.75 = average over year for program (salaries were adjusted quarterly from 60% of journeyman rate to 90% of rate).
Salary based on 261 days.

Administrative cost was for two journeyman painters.
Administrative cost = 2($27,697)(1.20)
= $66,472.80 total

Only 9 of 14 graduated to full-time jobs. (Dropouts were replaced, so full program cost is 14 x $24,927)
Hence, the full program cost is:

Salary + fringe benefits	= $348,978.00
Administrative	= 66,472.80
	$415,451.00

This is a higher number than listed in the original because not all the costs are included in the Board's DSB calculations.

Benefits

Following the same assumptions used to calculate the public assistance savings and tax benefits for the youth employment program, we can assess the Women's VICI program.

The benefits are:

a. Public assistance savings:
   1. for 9 who get jobs: 9 x $6,332,.79 = $56,995.11
   2. for 5 who worked one year: 5 x $772.00 = 3,860.00

   Total $60,855.11

b. Tax revenues. Start with a yearly salary of $27,697 - the journeyman rate - and escalate by 6%. The present value per person is $10,717. For 9 people, it is $96,451.

c. Value of Output. Output value is 1.14 times program cost, based on estimates vs. job costs (exclusive of administrative costs). Hence, value is equal to:

   ($348,978)(1.14) = $397,835

Cost/Benefit Ratio

Total Costs:	Program	= $415,451
Total Benefits:	PA	= $ 60,855
	Taxes	= $ 96,451
	Value	= $397,835
	Total	= $555,141

C/B ratio = 1:1.34

Two benefits stand out. The first is that the value of the community improvements from the VICI program is $1.14 for every dollar spent. Including public assistance savings, tax revenues, and the value of the output, each dollar of program costs results in $1.34 worth of total benefits to the participants and to society.

interface

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APPENDIX A

WORKSITE TRAINING PROGRAM DESIGN

March 14, 1984

A. INTRODUCTION

1. The Population:

The population with which we are concerned are mainly poor. They live in poor communities with limited resources including inadequate schools and health facilities. As a group they have a number of common problems some endemic, others systemic which if not addressed and arrested will only lead to structural unemployment for a large number of these youth.

A number of problems can hinder youth from participating fully in the labor force:

- poor reading, writing and computational skills;
- poor health/nutritional habits;
- inadequate housing;
- limited access to child care;
- limited understanding and unrealistic expectations of the world of work;
- limited knowledge of resources outside of (and often within) their communities;
- involvement in criminal activities;
- psychological problems;
- undiagnosed learning problems;
- lack of vocational skills.

Although a number of programs exist to provide employment services to youth, this group of youth is often "creamed out" of them. The target population often does not meet the educational entry criteria. Few programs are willing or have the resources to deal with young people who have yet to learn how to work. A strong need exists for employment programs which focus on the needs of this group. Individualized programs must be designed which provide the basic skills, social supports as well as vocational training that will bridge their experiential and intellectual gaps and prepare them for the world of work.

The majority of these youth, in spite of the complexity of the problems they encounter and the often overwhelming nature of their deficiencies, are often eager to work; they want to be involved in activities in which they can take pride. They bring energy and "spunk" from the streets. Given the proper supports, guidance, skills and opportunities they can be productive.

2. Project Overview

Goal: The program's goal is to provide youth with employability, job-seeking and maintenance skills, as well as positive attitudes about the world of work. Program participation is designed to lead to placement in unsubsidized employment (though not exclusively in the private sector) and ultimately to meaningful and productive working careers.

To reach this goal, the program will integrate cognitive skill development and work-site learning. Youth will develop the habits and attitudes required by employers by working in small groups under competent adult supervision in business-like work-site situations where young people are expected to succeed and conform to acceptable workplace conduct. In addition to learning how to work, participants will learn goal-setting, problem-solving, communication and literacy skills, all of which are necessary for successful labor force participation.

Process: The project will offer employability, job-seeking and job maintenance skills through a combined work-site training experience and educational program provided by existing community-based organizations (CBOs). The work-site training experience would come through projects set aside for youth in the City's capital budget for work projects in construction related trades. The educational and support service components will be contracted on a competitive basis by experienced CBOs following an RFP.

In summary, the program will contain the following elements:

- A continuum of learning experiences, ranging from life skills training and basic literacy to GED preparation; providing participants an opportunity to increase their reading and writing level by two grades above their entry status.

- Paid Work-site Training -- a combination of:

  - part-time work and part-time educational services (the amount of time spent in each would depend on the participant's individual assessment); or

  - an initial learning period to prepare participants for taking their GED, after which they could do full-time project work; or,

  - a graduated process in which youth -- after attaining certain educational goals as set forth in their individual plan -- would become eligible for increased hours of paid work-site training experience.

- World of Work Counseling must provide participants with instruction in work-appropriate behaviors; should teach youth how to obtain jobs using such techniques as video-taped mock interviews and role playing; provide exposure to employment fields of interest; foster the development of program participants' vocational interests.

- Support Services must be geared towards helping participants cope with problems that are obstacles to their full participation in the program. These often include assistance with child care, housing, welfare problems. These services would be offered based on assessments of individual need. On-site services or referral to a coordinated network of service providers are considered acceptable means of dealing with those presenting problems.

- Participation of the private sector and unions is important in providing the necessary certification of employability and skills mastered by program participants.

- Placement activities must be oriented towards a range of activities including GED preparation, college, training programs, as well as jobs. Links with PIC, industry and unions, public and the non-profit sector, all ought to be created and used to provide placement possibilities. Placement staff must work closely with all staff to insure appropriate matching of participants' interest and skills with available openings. The placement process should also integrate the certification process when referring participants and when making employers aware of the participants' and the program's capabilities. [Structured, in-depth follow-up and post-program activity is also necessary.]

CBOs answering the RFP with a program developed along the above lines must possess most of the following characteristics and demonstrate how these characteristics make them qualified -- or how they would compensate for not having others -- to receive a contract:

- experience working with at-risk youth and providing (some of the) necessary support services for their special needs;

- experience in the delivery of employment-based services to a disadvantaged population;

- direct ties or the capability of establishing direct ties to the public and private sector for the purposes of carrying out program needs;

- payroll and timekeeping capabilities;
- experience with or direct access to individuals experienced in construction related trades;
- work-site training experience;
- educational services or links to credible educational service;
- ability to provide follow-up services.

B. PROGRAM OUTLINE

1. Assessment

Initial Screening and Assessment

Purposes:

A. To familiarize the potential participant with the program goals, service system, expectation levels and minimum requirements for positive termination. Concrete information on participants' basic literacy, general educational development, attitudinal and social-psychological development will also be obtained. Basic socio-economic data should be collected as well.

B. Identify and assess the youth's needs, interests, skills, aptitudes, personal goals, and financial needs to determine if the program is appropriate. Those who do not exhibit the necessary level of motivation or for whom more appropriate systems of services, including job placement can be identified will be directed to the appropriate place. For those remaining individuals, benchmarks will be developed for each person based on the assessment.

Second Assessment Phase

Purpose: After determining that an individual can be served effectively through this program, more in-depth information must be obtained in order to prepare a schedule of services and a mode of delivery tailor-made to participants' needs and interests. While testing is a necessary component it must be conducted prudently as the effects of test anxiety, the arguments of cultural bias in standardized tests, etc., all must be considered.

2. Individual Learning Plan

An Individualized Learning Plan (ILP) should be formulated for each participant. While each participant is put on their own ILP track it should be acknowledged that not all program participants may need to participate in every phase of the program. Each participant moves through each phase of the program at his/her own pace; integrating testing and assessment and ongoing experiential learning activities. It would include: work experience, basic literacy/GED preparation, employability skill building, counseling and motivation development activities.

This ILP will form the basis of a benchmarking process which would allow for the monitoring of performance on an ongoing basis. This also allows youth to be held accountable for their rate of progress, and to experience success at various points prior to completion of the full program. It will also allow youth to help themselves since they will be able to monitor their own progress.

Upon successful completion, job placement or referrals to training programs or other educational services will be made.

4. Skills Training

a. Education

Goals: Raise the reading level of participant's at least two grade levels within nine months; provide reading and math skills necessary to assimilate construction and related non-construction vocational skills;

Provide connection to educational services leading to the attainment of at least the minimally required credentials necessary for most entry-level jobs in the primary labor market.

Method: The basic approach would be classroom instruction though there are many options in deciding who would deliver these services and with discretion exercised by the service providers. There would be a literacy "immersion" program in which intensive basic education is offered. The findings of the Literacy Task Force will be used as a basis for developing this area.

b. Work Experience

Goals: The basis for the work experience component of the project is "supported work" which is a transitional employment system that assists the "hard to employ" to gain the experience and develop the work habits necessary for successful work force participation.

Methods: • Work-site supervisors who train the participants in actual job tasks (focusing here on construction related trades); reinforce positive work habits (e.g. punctuality, attendance, proper attitudes and behavior, etc.) provide immediate feedback on the participants' performance and along with other staff will identify and address problem areas which have inhibited successful labor force participation in the past;

- Workload and demands placed upon the participants which will vary according to each individual's readiness. Initially the demands will be modest, however the staff will gradually increase hours of work, as well as the standards of job performance and the demands made upon the young people in ways which allow for success;

- Participants working generally in small crews. It's been found that this format encourages mutual support while teaching participants to work in a competitive environment based upon a system of incentives and supports built into the program;

- Private sector involvement to assess the quality of the work-site supervisor's choice and the complexity of the youth's tasks; provide exposure to private and public sector opportunities and demands; provide exposure to PIC and other training programs for advanced skill training;

- Certify youth as displaying employability and rudimentary construction skills. A credential or certification will be developed that receives the "imprimateur" of the private sector to help ease job placement in unsubsidized employment.

c. Employability Training

Purpose: To assist the participants in adjusting their attitudes and behavior to the world of work.

Objectives: This program component will emphasize employability through a comprehensive approach to training, integrating the areas of job readiness skills and motivational training in every phase of the project. As a result of the training the youth will have developed and internalized the following:

- Appropriate skills in seeking and retraining employment;

- Interview and resume writing skills;

- Job related socialization skills;

- Appropriate dress, etc.

Method: Participants will obtain all employability training within the educational counseling and work experience phases of the program through

classroom training and work-site supervision. A highly structured system of rules and regulations is inherent in the employability training and curriculum. This will allow documentation of the participants' progress in the basic work skill areas of attendance punctuality and attitude.

5. Support Services

Because of the severe needs of this population, support services become critical. This has been documented by several studies including Bank Street's Basic Skills Academy Feasibility Study on Youth Unemployment (1983), as well as our interviews with a number of current community based agencies providing employment services. It is generally agreed that in order for many of these youth to benefit fully from skills training, a range of services must be provided, subject to their ability. These services may be provided directly or by referral, as needed by individuals. They should include: health care, housing, child-care, welfare and court advocacy, access to prenatal/pregnancy care, etc. Methods should be developed which insure that if the services are provided through referrals or linkages to other agencies there will be effective monitoring of these services. Although such services are generally considered auxillary to an employment program, for our purposes they should be viewed as integral and planned for accordingly.

6. Placement/Follow-up

A variety of positive outcomes will be available to successful program participants based upon their initial assessment and careful monitoring of their program performance. CBO(s) selected to deliver the program services must have demonstrated a capacity to develop unsubsidized full-time placements in the private, public or non-profit sector. This may be done through their own job-development capabilities or links which are established with the PIC or other private or public sector contacts. Those program participants who are interested in additional education and vocational training will be directed to the appropriate places. A great body of supporting evidence points to the critical role that supportive services and post-program follow-up play in enabling the successful program participant to perform effectively in the work-site during the transition period. The evidence suggests that the absence of these post-program services has helped to explain why many have failed at the work-site even when they had been exceptional program participants.

Contact will therefore be maintained with the individuals during the post-placement stage (through meetings, weekly phone conversations, etc.) to help insure their successful participation in work, education or training activities by addressing any personal, vocational or academic problems impeding their performance.

C. STAFFING

Staff should be responsible adults who are capable of relating to youth; who are also able to hold positive attitudes about this population, and who have expectations that youth can succeed even through it might take time.

- Staff should have experience and/or qualifications in the area in which they would be working;
- Staff should be in constant collaboration with each other on progress of students, and in the exchange of materials and techniques;
- Staff goals and philosophy about working with youth should be complementary to the agency;
- Staff roles and responsiblities should be very clear to ensure maximum effectiveness;
- Mechanisms should be developed that would afford staff support in doing a very difficult job; such as: opportunities to be involved in professional experiences outside of work environment; -- peer supervision; input into scheduling, ongoing planning and evaluation; joint staff meetings between staff of various agencies involved with the project;
- The ratio of staff to kids should be low enough to allow for individualized attention.

D. EVALUATION

1. Individual

In addition to the on-going assessment which participants will undergo during the program, a final evaluation will be conducted. It should measure participants overall progress towards meeting the goals outlined in the ILP.

There are a variety of ways in which this may be done. These include:

- Post interview by a panel using original entry criteria as a benchmark;
- Assessment of career vocational status;
- Educational testing.

Participants with satisfactory completion records will receive a certificate of completion.

2. Program

It is very important that the agency be held responsible for providing youth with a quality experience. Youth should not fail because of inadequacies in the agency.

Clear standards of performance will be established which provide the benchmarks for planning and subsequently measuring the quality, effectiveness and timeliness of the project's operations. Pre-set criteria developed with private sector input will assess the quality of the worksite and its learning potential, the level of supervision, the program's compliance with procedural regulations, enforcement of time and attendance as well as the value of the work output.

Such a performance monitoring and evaluation function may be conducted by an intermediary organization. This would be similar to the roles that Youthwork, Manpower Demonstration Research, Corporation for Public/Private Ventures, etc. have played in other programs. This intermediary would amass the necessary information documenting the degree to which the services and plans provided to youth were working. In addition, the on-going monitoring would allow mid-course corrections when necessary and avoid negative evaluations at the end and wasted time for the young participants. Ultimately, the post-program performance of the graduates would determine the value and success of the program. Although other models have utilized the monitoring agency as a fiscal agent, we would want to avoid this dual role.

JOB DESCRIPTIONS

Project Director:

Responsible for the overall operations and functions of the project. Oversees the project's development, implementation, coordination and monitoring. Supervises the administrators and their staff, monitors the budget and performs other administrative duties which may be required.

Job Developer:

Responsible for the development of jobs with employers, job matching, assessing participants for job readiness, and maintaining linkages with private sector employers. Will meet regularly with administrative, instructional and counseling staff to assess participant progress and job readiness.

Teacher/Counselor:

Provides instruction in literacy, basic skills and GED preparation. Will plan the courses, develop lesson plans and measure progress of students though formal and informal assessments. Will use these assessments to design effective training and educational program in concert with other program staff.

World-of-Work Counselor/Resource Coordinator:

Responsible for assisting participants in developing the necessary social skills and emotional stability to perform effectively in the working world. Will conduct employability skill development workshops in group and individual formats. Will also have primary responsibility for coordinating the matching of social services with those participants who require such assistance.

Work-Site Supervisors/Crew Leaders:

Responsible for the on-site skills training of the participants. Skilled in construction related trades they should be prepared to move youth along a skill progression while meeting production schedules.

Work Coordinator:

Responsible for approving and scheduling the work, estimating job costs and supply needs and securing supplies, supervising crew leaders and inspecting the work. Through links with unions and other contruction employers, should provide job information and insure the maintenance of learning environment and high quality product.

Bookkeeper:

Responsibile for the financial record-keeping of the project. Assists the Project Director in planning and controlling expenditures to keep spending in line with budget guidelines.

Secretary:

Performs all clerical duties including telephone answering, copying, filing, etc. Also performs other requisite tasks.

Monitor at Department of Employment:

Oversee the recruitment and screening process, data collection while also monitoring the administration of the program. Should develop reporting forms, performance criteria and monitor them though the course of the contract.

Source: New York City Department of Employment.